ENVIRONMENTAL RESULTS PROGRAM REGULATIONS FOR PRINTERS

Air Pollution Control Regulations for Non-heatset Offset Lithography, Graphic Arts, and Screen Printing

AMEND:

310 CMR 7.03(12)
Non-heatset Offset Lithographic Printing. On or after July 1, 1992 construction, substantial reconstruction or alteration of any non-heatset offset lithographic printing press except such presses present at a facility subject to 310 CMR 7.26(20)-(29), utilizing VOC containing compounds, including, but not limited to, makeup solvents, fountain additives, alcohol and cleanup solution, complying with the following criteria:

(a) 1. Except as provided for in 310 CMR 7.03(12)(a)2., this standard is applicable only where the total facility, including the new or modified printing press, will not have a usage rate of all VOC containing compounds, including, but not limited to, printing inks, overprint coatings,makeup solvents, fountain additives, alcohol and cleanup solution, exceeding 670 gallons per calendar month. This usage rate shall include all VOC containing compounds used in all printing and non-printing operations at the facility, including but not limited to non-heatset offset lithographic printing presses.

2. As an alternative determination of applicability, this standard is applicable only where the total facility, including the new or modified printing press, will not have a facility-wide emission rate of VOC exceeding 2.5 tons per calendar month. This emission rate shall include emissions from all printing and non-printing operations at the facility, including but not limited to non-heatset offset lithographic printing presses.

(b) Non-heatset offset lithographic printing presses subject to 310 CMR 7.03(12) and employing a fountain solution containing VOC shall meet the following specifications:

1. For web presses installed prior to May 1, 1998:

a. The fountain solution shall be maintained at 1.6% by volume or less of alcohol; or

b. The fountain solution shall be maintained at 3.0% by volume or less of alcohol and the fountain solution refrigerated to a temperature of less than 60E Fahrenheit.

2. For web presses installed on or after May 1, 1998, the fountain solution shall not contain any alcohol.

(d) Any person subject to 310 CMR 7.03(12) shall maintain records sufficient to demonstrate compliance. Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department upon request. Such records shall include, but are not limited to:

(1) Identity, formulation (percent VOC by weight as determined by the manufacturer's formulation data or EPA Method 24 or 24A test) and quantity (gallons per calendar month) for each VOC containing compound used at the facility, including but not limited to:

a. Alcohol;
b. Makeup solvent;
c. Fountain additives;
d. Printing Ink;
e. Cleanup solution; and,
f. Overprint coatings.

ADD:
310 CMR 7.03(16)
Flexographic, Gravure, Letterpress, and Screen Printing. On or after [promulgation date], construction, substantial reconstruction or alteration of any flexographic, gravure, letterpress, or screen printing press at a facility not subject to 310 CMR 7.26(20)-(29) and utilizing VOC containing compounds, including, but not limited to, printing inks and overprint coatings, alcohol, makeup solvents, and cleanup solution, complying with the applicable performance standards in 310 CMR 7.26(25) and 310 CMR 7.26(26) and with the following criteria:

(a) 1. Except as provided for in 310 CMR 7.03(16)(a)2., this standard is applicable only where the total facility, including the new or modified printing press, will not have a usage rate of all VOC containing compounds, including, but not limited to, printing inks, overprint coatings, alcohol, makeup solvents, and cleanup solution, exceeding 670 gallons per calendar month. This usage rate shall include all VOC containing compounds used in all printing and non-printing operations at the facility.

2. As an alternative determination of applicability, this standard is applicable only where the total facility, including the new or modified printing press, will not have a facility-wide emission rate of VOC exceeding 2.5 tons per calendar month. This emission rate shall include emissions from all printing and non- printing operations at the facility.

(b) Any person subject to 310 CMR 7.03(16) shall maintain records sufficient to demonstrate compliance. Such records shall include, but are not limited to records demonstrating that cleanup solutions, inks, coatings, and adhesives are in compliance with applicable standards set forth in 310 CMR 7.26(20)-(29) and that usage rate or emissions rate do not exceed the rates set forth in 310 CMR 7.03(16)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department upon request.

310 CMR 7.03(17)
Facilities Subject to 310 CMR 7.26 (20) Through (29). Construction, substantial reconstruction or alteration of any lithographic, flexographic, gravure, letterpress, or screen printing press at a facility subject to 310 CMR 7.26(20)-(29) and utilizing VOC containing compounds, including, but not limited to, printing inks and overprint coatings, fountain additives, alcohol, makeup solvents, and cleanup solution complying, with the applicable performance standards set forth in 310 CMR 7.26(20)-(29).

AMEND:
7.18(12) U Graphic Arts.

(a) On or after January 1, 1994, no person who owns, leases, operates or controls packaging rotogravure or publication rotogravure printing lines (except such printing presses or operations at a facility subject to 310 CMR 7.26(20)-(29)), which have the potential...

7.18(14) U Paper Surface Coating
(a) On or after December 31, 1982, unless granted an extension by the Department until January 1, 1987, or unless the facility is subject to 7.26(20)-(29), no person who owns, leases, operates, or controls a paper surface coating line,...

7.18(25) (a) Applicability. 310 CMR 7.18(25) applies in its entirety... organic compounds. Facilities subject to 310 CMR 7.26(20)-(29) are not subject to 310 CMR 7.18(25).

ADD:

310 CMR 7.26(20) ENVIRONMENTAL RESULTS PROGRAM: LITHOGRAPHIC, GRAPHIC ARTS, AND SCREEN PRINTING.

(a) 310 CMR 7.26(20)-(29) sets forth performance standards and recordkeeping requirements for lithographic, graphic arts and screen printing at facilities subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21).
(b) Facilities subject to 310 CMR 7.26(20) through (29) are not subject to 310 CMR 7.18(12),(14) and (25).
(c) By complying with the recordkeeping requirements contained in 310 CMR 7.26(20)-(29), and with the certification requirements contained in 310 CMR 70.00, and by maintaining actual emissions below the levels contained in 310 CMR 7.26(20)1.-4., the owner/operator of a facility subject to 310 CMR 7.26(20) through (29) restricts the federal potential emissions of the facility to below the applicable major source thresholds. As such, the operations will not be subject to 310 CMR 7.00 Appendix A (Emission Offsets and Nonattainment Review), 310 CMR 7.00 Appendix C (Operating Permit Program), 40 CFR 52.21 (Prevention of Significant Deterioration), and 40 CFR 63 (Maximum Achievable Control Technology). For every rolling 12 month period, the potential and actual emissions of the facility shall be less than the following limitations:

1. 50 tons of VOC or NO_x, or 100 tons of any other regulated air pollutant;
2. 10 tons per year of any HAP;
3. 25 tons per year of a combination of HAPs; and
4. Any lesser threshold for a single HAP that the EPA may establish by rule.

(21) Applicability:
(a) The provisions of 310 CMR 7.26(20)-(29) apply to the owner or operator of each facility, except those facilities subject to 310 CMR 7.00 Appendix C:
(1) with one or more screen or lithographic printing presses with a primary Standard Industrial Classification code of 23, 27, or under the new North American Industry Classification System (NAICS); 323110, or 323119, or,

(2) with one or more gravure, flexographic, or letterpress printing presses with a primary Standard Industrial Classification code of 27, or under the new NAICS; 323111, 323112, or 323119, or,

(3) with one or more printing presses with a primary Standard Industrial Classification code of 26, or under the new NAICS; 323113 or 323119.

(b) The provisions of 310 CMR 7.26(20)-(29) do not apply to the owner or operator of a facility that performs lithographic, gravure, flexographic, letterpress, or screen printing with a primary Standard Industrial Classification code different from those listed in 310 CMR 7.26(21)(a).

(22) Definitions: The definitions found in 310 CMR 7.00 apply to 310 CMR 7.26(20)-(29). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.26(20)-(29). Where a term is defined in the 310 CMR 7.00 Definitions section and the definition also appears in 310 CMR 7.26(22), the definition found in 310 CMR 7.26(22) controls.

Adhesive means any substance that is used to bond one surface to another surface.

Alcohol means any of the following compounds, when used as a fountain solution additive for offset lithographic printing: ethanol, n-propanol, and isopropanol.

Conforming operation means a press or presses that meet the standards established in 310 CMR 7.26(24)(d), 310 CMR 7.26(25)(a), or 310 CMR 7.26(26)(a).

Conductive Ink means an ink which transmits electricity and is used in the production of electronic circuits.

Extreme Performance Ink or Extreme Performance Coating means an ink or coating used in screen printing on a non-porous substrate that is designed to resist or withstand any of the following: more than two years of outdoor exposure or exposure to industrial-grade chemicals, solvents, acids, or detergents, oil products, cosmetics, temperatures exceeding 76EC (170EF), vacuum forming, embossing or molding.

Flexographic printing means a printing system utilizing a flexible rubber or elastomeric image carrier in which the image area is raised relative to the non-image area. The image is transferred to the substrate through first applying ink to a smooth roller which in turn rolls the ink onto the raised pattern of a rubber or elastomeric pad fastened around a second roller, which then rolls the ink onto the substrate.

Gravure printing means an intaglio printing operation in which the ink is transferred from wells on a plate to the substrate by pressure, with excess ink removed from the surface of the plate, which is supported by an impression roller, by a doctor blade.

HAP means an air contaminant listed by EPA as a HAP, pursuant to 42 U.S.C. 7401, ' 112. That list is incorporated by reference herein, together with all amendments and supplements thereto.

Heatset inks means inks used to set or fix the ink pigment and binding resins to the substrate.

Heatset press means an offset lithographic printing press, where the solvent component of the ink is driven off with the use of heat from dryers or ovens. Thermography is not included in this definition.

Incidental material(s) means one or more VOC containing material(s) which do not, in total, exceed 55 gallons per rolling 12 month period and which do not comply with an applicable standard set forth in 310 CMR 7.26(20)-(29).

Large printer means a printer that uses a total of more than 3,000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling twelve (12) month period. Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol and ultraviolet ink are excluded from this calculation.

Letterpress Printing means a method where the image area is raised relative to the non-image area and the ink is transferred to the paper directly from the image surface.

Metallic Ink means an ink that contains greater than 50 grams of metal per liter (0.4 lb/gal) of ink.

MSDS means a Material Safety Data Sheet.

Midsize printer means a printer that uses a total of more than 275 and no more than 3000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling twelve (12) month period, or that uses a total of more than 55 gallons of alcohol per rolling 12 month period and a total of no more than 3000 gallons of cleanup solution and ink/coating/adhesive with a VOC content greater than 10% by weight as applied, per rolling 12 month period. Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol and ultraviolet ink are excluded from this calculation.

Non-conforming operation means a press or presses that use ink, coating, or adhesive which does not meet the standards established in 310 CMR 7.26(24)(d), 310 CMR 7.26(25)(a), or 310 CMR 7.26(26)(a) at a printer who has demonstrated that it is technically or economically infeasible to use ink, coating, or adhesive that meets those standards.

Non-heatset offset lithographic printing means offset lithographic printing in which the ink dries by oxidation and absorption into the substrate without the use of heat from dryers or ovens.

Offset Lithographic Printing means a planeographic method in which the image and non-image areas are on the same plane.

Plastisol ink(s) means a dispersion of finely divided resin in a plasticizer.

Printer means the owner or operator of a facility subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21).

Rolling 12 month period or Rolling twelve month period means any consecutive twelve month period of time.

Screen Printing means a process where the printing ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.

Small printer means a printer that uses a total of no more than 275 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied per rolling 12 month period and that uses less than or equal to 55 gallons of alcohol per rolling 12 month period. Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol and ultraviolet ink are excluded from this calculation.

Solvent means organic compounds which are used as adhesives, diluents, thinners, dissolvers, viscosity reducers, cleaning agents or for other similar uses.

Thermography means a process for simulating a raised printed surface by dusting the wet ink with a resinous material and then fusing it to the ink with heat to produce a raised effect.

Ultraviolet inks means inks which dry by polymerization reaction induced by ultraviolet energy.

Water-based ink/coating/adhesive means an ink, coating, or adhesive with a VOC content less than or equal to 10% by weight as applied.

(23) Rules for Permitted Facilities:

(a) Each printing press shall be operated on or after May 1, 1998 in compliance with the standards and requirements set forth in 310 CMR 7.26(20)-(29) except in the following situations:

1. if a non-heatset press or conforming operation is covered by a plan approval pursuant to 310 CMR 7.02(2) or a permit pursuant to 310 CMR 7.02(12) issued prior to May 1, 1998, then the

non-heatset press or conforming operation may be operated in compliance with that plan approval or permit in lieu of operating in compliance with 310 CMR 7.26(20)-(28) until May 1, 2001, at which time the non-heatset press or conforming operation shall be operated in compliance with 310 CMR 7.26(20)-(29), and the conditions of the plan approval or permit as it pertains to the non-heatset or conforming operation shall automatically expire.

2. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits no more than ten (10) tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(2) issued prior to May 1, 1998, then the heatset press or non-conforming operation may either be operated in compliance with that plan approval or operated in compliance with the applicable requirements set forth in 310 CMR 7.26(27)(a)(1) and (2).

3. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits more than ten (10) tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(2) or a permit pursuant to 310 CMR 7.02(12), then that heatset press or non-conforming operation shall be operated in compliance with the terms and conditions of that plan approval or permit.

(24) Standards for Non-Heatset Offset Lithographic Printing:

(a) Fountain solution standards for midsize and large printers: The following standards apply to midsize and large printers, except that they do not apply to the fountain solution in a press with a fountain solution reservoir that holds less than or equal to one (1) gallon. Printers may calculate the percent of alcohol in fountain solution using the methodology set forth in 310 CMR 7.26(24)(a)3.:

1. For web-fed presses:
   a. fountain solution shall not contain any alcohol.

2. For sheet-fed presses:
   a. unrefrigerated fountain solution containing alcohol shall contain no more than 5% VOC by weight, including but not limited to alcohol, and;

   b. refrigerated fountain solution containing alcohol shall contain no more than 8% VOC by weight, including but not limited to alcohol, and shall be refrigerated to a temperature of less than 60EF.

3. Fountain Solution Weekly Averaging: A printer may elect to meet a calendar week average VOC content for fountain solution at an individual press in demonstrating compliance with 310 CMR 7.26(24)(a)2. In doing so, a printer shall calculate the average VOC content for fountain solution per calendar week using the following formula:

$$VOC_w = \frac{W_1Voc + W_2Voc + W_3Voc}{W_T}$$

where: VOC_w = Weight percent of VOC
W_1Voc = Weight of VOC in Concentrate used per week
W_2Voc = Weight of VOC in Additive used per week
W_3Voc = Weight of VOC added per week
W_T = Total Weight of fountain solution used per week

(b) Fountain solution tank standard: Fountain solution mixing and storage tanks shall be covered, except when adding or removing solution.

(c) Cleanup solution standard: Cleanup solution used to clean an offset lithographic printing press shall meet the following standards, except that these standards do not apply to incidental materials:

1. cleanup solution either shall not exceed 30% VOC by weight as applied, calculated pursuant to EPA test method 24, or shall have a VOC composite partial pressure of 10 mmHg or less at 20EC (68EF),
2. cleanup solution shall be kept in covered containers during transport and storage, and
3. shop towels contaminated with cleanup solution shall be kept, when not in use, in covered containers.

(d) Adhesive Standard for midsize and large printers: Adhesives shall meet the following limit for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Adhesive	300 (2.5)

(25) Graphic Arts Printing: Gravure, Letterpress, and Flexographic Printing:

(a) Ink, coating, and adhesive standards for midsize and large printers: The following standards apply to midsize and large printers. Inks, coatings, and adhesives, except incidental materials, shall meet the following limits for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

ink	300 (2.5)
Coating	300 (2.5)
Adhesive	150 (1.25)

(b) Cleanup solution standard: Cleanup solution used to clean a flexographic, gravure, or letterpress printing press shall meet the following standards, except that these standards do not apply to incidental materials:

1. cleanup solution shall have a VOC composite partial pressure of 25 mmHg or less at 20EC (68EF),
2. cleanup solution shall be kept in covered containers during transport and storage, and
3. shop towels contaminated with cleanup solution shall be kept, when not in use, in covered containers.

(26) Screen Printing:

(a) Ink, coating, and adhesive standards for midsize and large printers: The following standard applies to midsize and large printers. Inks, coatings, and adhesives, except incidental materials, used in screen printing shall meet the following limits for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Ink	400 (3.3)
Coating	400 (3.3)
Adhesive	400 (3.3)
Extreme Performance Ink/Coating	800 (6.7)
Metallic Ink	400 (3.3)
Conductive Ink	850 (7.1)

(b) Cleanup solution standard: Cleanup solution used in screen printing shall meet the following standards, except that these standards do not apply to incidental materials:

1. cleanup solution shall have a VOC composite partial pressure of 5.0 mmHg or less at 20EC(68EF),
2. cleanup solution shall be kept in covered containers during transport and storage, and
3. shop towels contaminated with cleanup solution shall be kept, when not in use, in covered containers.

(27) Printers with Heatset Presses or Non-Conforming Operations:

(a) A printer that emits no more than ten (10) tons of actual VOC emissions facility-wide on a rolling 12 month period based on raw material inputs may operate a heatset press(es) or non-conforming operation(s) without a plan approval or permit pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12), provided that:

1. with respect to the heatset press(es), the printer operates such presses in compliance with cleanup solution standards set forth in 310 CMR 7.26(24)(c), the fountain solution requirement for web-fed lithographic presses set forth in 310 CMR 7.24(a)1., and applicable recordkeeping requirements set forth in 310 CMR 7.26(28). In addition, the printer shall calculate and

keep records of actual VOC and HAP emissions per calendar month based on each VOC and each HAP containing compound used at the facility pursuant to 310 CMR 7.26(28)(c)3.

2. with respect to the non-conforming operation(s), the printer operates in compliance with applicable cleanup solution standards set forth in 310 CMR 7.26(25)(b) and 310 CMR 7.26(26)(b), and applicable recordkeeping requirements set forth in 310 CMR 7.26(28). In addition, the printer shall calculate and keep records of actual VOC and HAP emissions per calendar month based on each VOC and each HAP containing compound used at the facility pursuant to 310 CMR 7.26(28)(c)3.

(b) A printer that emits no more than ten (10) tons of actual VOC's facility-wide on a rolling 12 month period based on approved control equipment or other enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12), including but not limited to production and operational restrictions, may install one or more heatset presses or non-conforming operations without obtaining a plan approval or permit pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12) for the new press(es) or operation(s) provided that:

1. installation of the new heatset press(es) or non-conforming operation(s) will not result in more than ten (10) tons per year (TPY) of actual VOC emissions facility-wide on a rolling 12 month period based on (i) raw material inputs associated with the new press(es) or operation(s); and,(ii) with respect to existing heatset press(es) or non-conforming operation(s), approved control equipment or other enforceable restrictions, including but not limited to production and operational restrictions; and,

2. with respect to the new press(es) or operation(s), the printer complies with the requirements set forth in 310 CMR 7.26(27)(a)(1) and (2).

(c) A printer that emits more than ten (10) tons of actual VOCs facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12), including but not limited to production and operational restrictions, shall, with respect to heatset press(es) or non-conforming operation(s), comply with the terms and conditions of a plan approval or permit issued pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12).

(d) Notwithstanding 310 CMR 7.26(27)(c), a printer that emits more than ten (10) tons of actual VOCs facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12), including but not limited to production and operational restrictions, need not obtain a plan approval or permit pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12) for existing press(es) or operation(s) provided that:

1. installation of the existing heatset press(es) or non-conforming operation(s) occurred such that the actual VOC emissions facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(2) or 310 CMR 7.02(12), including but not limited to production and operational restrictions were less than or equal to (10) tons per year; and,
2. such presses or operations comply with the requirements set forth in 310 CMR 7.26(27)(a)(1) and(2).

(28) Recordkeeping: Each printer shall maintain records sufficient to demonstrate compliance. Such records shall be kept on-site for at least three (3) years, and shall be made available to representatives of the Department upon request. Such records shall include, but are not limited to, the following:

(a) Each small printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a small printer, including but not limited to records concerning cleanup solutions, alcohol, inks, coatings, adhesives and incidental materials, excluding water-based inks/coatings/adhesives, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;
2. records demonstrating that cleanup solutions are in compliance with applicable standards set forth in 310 CMR 7.26(20)-(29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as determined by the Department and EPA, or appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00; and,
3. for water-based inks/coatings/adhesives, ultraviolet inks, and plastisol inks, MSDSs or other records demonstrating that the ink/coating/adhesive is water-based, ultraviolet, or plastisol as applicable.

(b) Each midsize printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a midsize printer, including but not limited to records concerning cleanup solutions, inks, coatings, adhesives and incidental materials, excluding water-based inks/coatings/adhesives, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;
2. records demonstrating that cleanup solutions, inks, coatings, and adhesives are in compliance with applicable standards set forth in 310 CMR 7.26(20)-(29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as

determined by the Department and EPA, and appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00;

3. records of the percent by weight of VOC in fountain solution as measured each time alcohol or alcohol mix is used to mix a new batch of fountain solution and each time it is added to fountain solution on-press, based on analytical data, and the proportions of the constituents mixed;

4. calculations performed pursuant to 310 CMR 7.26(24)(a)3;

5. the daily temperature of fountain solutions required to be refrigerated pursuant to 310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;

6. for water-based inks/coatings/adhesives, ultraviolet inks, and plastisol inks, MSDSs or other records demonstrating that the ink/coating/adhesive is water-based, ultraviolet, or plastisol as applicable; and,

7. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses, records (e.g., MSDSs) demonstrating that the fountain solution constituents are alcohol-free.

(c) Each large printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a large printer, including but not limited to records concerning cleanup solutions, inks, coatings, adhesives and incidental materials, excluding water based inks/coatings/adhesives, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;

2. records demonstrating that cleanup solutions, inks, coatings, and adhesives are in compliance with applicable standards set forth in 310 CMR 7.26(20)-(29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as determined by the Department and EPA, and appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00;

3. a calculation of actual VOC and HAP emissions per calendar month based on each VOC and each HAP containing compound used at the facility. VOC emissions from non-heatset inks used in lithography shall be calculated by assuming that 5 percent of the inks' VOCs are emitted to the atmosphere and 95 percent are retained in the paper. VOC emissions from heatset inks used in lithography shall be calculated by assuming that 80 percent of the inks' VOCs are emitted to the atmosphere and 20 percent are retained in the paper;

4. the percent by weight of VOC in fountain solution as measured each time alcohol or alcohol mix is used to mix a new batch of fountain solution and each time it is added to fountain

solution on-press, based on analytical data and the proportions of the constituents mixed;
5. calculations performed pursuant to 310 CMR 7.26(24)(a)3;
6. the daily temperature of fountain solutions required to be refrigerated pursuant to 310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;
7. for water-based inks/coatings/adhesives, ultraviolet inks, and plastisol inks, MSDSs or other records demonstrating that the ink/coating/adhesive is water-based, ultraviolet, or plastisol as applicable; and,
8. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses must keep records (e.g. MSDSs) demonstrating that the fountain solution constituents are alcohol-free.

(29) Compliance Certification Requirement:

(a) Beginning on September 15, 1998 and annually thereafter, each printer shall submit to the Department a compliance certification in accordance with 310 CMR 70.00 and 310 CMR 7.26(29). As part of the certification, each large printer shall submit information the Department may specify, including:

1. the nature and amounts of emissions from the facility,
2. information which may be needed to determine the nature and amounts of emissions from the facility, and
3. any other information pertaining to the facility which the Department requires.

(b) If, during the course of the certification period, a printer installs a new printing press or makes operational changes which will cause a modification of its size classification, the printer shall, within sixty (60) days of operation of the new press or actual operational changes respectively, notify the Department in writing. Such printer shall comply with 310 CMR 7.26(20)-(29) based on the applicable new size classification as soon as the new press is operating or the operational change is made.

(c) If, during the course of the certification period, a printer relinquishes an existing plan approval in accordance with 310 CMR 7.26(23)(a)(1) or (2), then within thirty (30) days of such change the printer shall notify the Department in writing.

310 CMR 30.000 Hazardous Waste Regulations for Printers

ADD:
TO 310 CMR 30.202(4)

"Printers subject to 310 CMR 71.00 are exempt from any requirement in 310 CMR 30.200 regarding Class A
recycling permits to recover silver from wastewater, except where specifically stated in 310 CMR 71.00."

ADD:
TO 310 CMR 30.221(5)

" Printers subject to 310 CMR 71.00 are exempt from any requirement in 310 CMR 30.200 regarding Class A recycling permits to recover silver from wastewater, except where specifically stated in 310 CMR 71.00."

ADD:
TO "description" column of 310 CMR 30.221(10)

", and except such material recycled at a printer subject to 310 CMR 71.00."

310 CMR 71.00 Industrial Wastewater Standards for Photo Processing and Printers

310 CMR 71.01 Purpose and Authority

(1) The purpose of these regulations is to provide for the protection of public health, safety, welfare and the environment by establishing performance standards for photo processors and printers and requiring a performance-based facility-wide compliance certification in accordance with 310 CMR 70.00.

(2) 310 CMR 71.00 is promulgated pursuant to the authority of M.G.L. c.21, ' 26-53 and M.G.L.c. 21C.

310 CMR 71.02 Definitions

Cartridge unit means any variety of hollow canisters containing steel wool or fiberglass fibers impregnated with iron filings which are used for silver recovery. These units use metallic replacement to recover silver. They are sometimes called "chemical recovery cartridges", "metallic recovery cartridges" or "canisters".

Class A recycling permit means a permit issued pursuant to 310 CMR 30.221.

Container means any portable device in which an industrial wastewater is stored, transported, treated, disposed of, or otherwise handled.

Equivalent POTW Permit means a permit issued by a Publicly Owned Treatment Works (POTW) containing an effluent limit of no more than 2 mg/l for total silver (i.e., 2 parts per million).

Industrial Wastewater means wastewater resulting from any process of industry, trade or business, regardless of volume or pollutant content. Wastewater which contains only sewage, non-contact cooling water , compressor or air conditioner condensate, including wastewaters from restaurants and school/industry cafeterias is **not** considered industrial wastewater.

Photo processor means an facility, as defined in 310 CMR 71.00, that performs photo processing (i.e., processing color and black and white prints and slides).

Photo processing means processing color or black and white film, prints, or slides.

Printer means the owner or operator of a facility subject to 310 CMR 7.26(20)-(29) pursuant to 310 CMR 7.26 (21).

Publicly Owned Treatment Works or POTW means any device or system used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid

nature which is owned by a public entity. A POTW includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Silver Recovery System or system, or silver recovery unit or unit means equipment or a process that removes silver from solutions such as fixers, bleach fixers, washless stabilizers, and low flow washes.

Small scale precipitation unit means an enclosed pre-assembled unit which uses chemicals to cause the silver to settle to the bottom of the container. The water is then separated from the silver on the bottom and is discharged. The resultant sludge is sent off-site for refining.

Tank means a stationary device used to store or contain an accumulation of industrial wastewater and which is constructed of non-earthen materials (e.g., concrete, steel or plastic) which provide structural support.

310 CMR 71.03 Applicability

(1) Unless exempt pursuant to 310 CMR 71.03(2), the following photo processors are subject to 310 CMR 71.00:
   (a) photo processors that perform photo processing in a commercial space; or
   (b) photo processors that use automated photo processing equipment.

(2) The following photo processors are exempt from 310 CMR 71.00:
   (a) photo processors that discharge or generate industrial wastewater from photo processing and industrial wastewater from other industrial processes;
   (b) photo processors that process motion picture film;
   (c) photo processing performed in a dental or other medical offices;
   (d) photo processors described in 310 CMR 71.07(1)(a) and (b) that are not required to submit a compliance certification. Such exemption shall expire at the earlier of an election by an otherwise exempted photo processor to certify in accordance with 310 CMR 71.00, or at the expiration of any permit, described in 310 CMR 71.07(1)(a) or (b), held by that otherwise exempted photo processor.
   (e) photo processing performed in a residence; and
   (f) photo processors using only hand tray processing.

(3) 310 CMR 71.00 applies to printers subject to 310 CMR 7.26(20)-(29).

310 CMR 71.04 Performance Standard for Photo Processors and Printers With Equivalent POTW Permits

Each photo processor and each printer with an equivalent POTW permit shall comply with that equivalent POTW permit and the applicable requirements of 310 CMR 71.05(2)-(4) and 310 CMR 71.06.

310 CMR 71.05 Performance Standard for Photo Processors and Printers Without Equivalent POTW Permits That Discharge or Ship Industrial Wastewater to a POTW

Except as set forth in 310 CMR 71.05(6), each photo processor and each printer without an equivalent POTW permit that discharges or ships industrial wastewater to a POTW shall comply with the applicable requirements of 310 CMR 71.06 and the following:

(1) Discharge Limit: Each photo processor and each printer shall not discharge or ship industrial wastewater to a POTW unless the wastewater from photo processing contains no more than 2 mg/l (i.e., 2 parts per million) of silver, measured in accordance with 310 CMR 71.05(3). In addition, [by one year from promulgation date] no printer shall discharge or ship to a POTW wastewater containing dichromate (chromic acid) resulting from film processor cleaning operations.

(2) Operation and Maintenance: Each photo processor and each printer shall maintain a silver recovery unit in accordance with the manufacturer's or vendor's instructions to meet the 2 mg/l silver limit, or the limit set forth in an equivalent POTW permit, whichever is stricter.

(3) Sampling and Analysis: Each photo processor and each printer shall sample its wastewater and shall analyze the sample for silver content.

(a) Frequency: Sampling and analysis shall occur as frequently as necessary to demonstrate that the discharge complies with 310 CMR 71.05(1) and 71.06(2), and at least monthly, unless the Department approves a different frequency, or unless a different frequency is set in accordance with a process reviewed and approved by the Department.

(b) Methodology: The sample shall be representative of wastewater composition during the selected day, and shall be taken after the photo finishing process (i.e., after combination with other wastestreams from photo processing) but prior to dilution with other wastewater. The sample shall be analyzed by a state-certified laboratory, a photographic equipment manufacturer, or a photochemical manufacturer provided that the lab uses methods prescribed in Standard Methods for the Examination of Water and Wastewater, issued by the American Health Association, American Waterworks Association, and the Water Pollution Federation, 1992 edition or more recent.

(4) Recordkeeping and Reporting:

Each photo processor shall keep the following records in 310 CMR 71.05(4)(a)-(f) and each printer shall keep the following records in 310 CMR 71.05(4)(a)-(g) on-site for at least three (3) years. In addition each photo processor and each printer shall submit the following records in 310 CMR 71.05(4)(a)-(f) to DEP with the compliance certification required pursuant to 310 CMR 71.07:

(a) sampling dates and results conducted in accordance with 310 CMR 71.05(3);
(b) for silver recovery systems with cartridge units, date(s) of silver recovery cartridge installation and replacement;
(c) for silver recovery systems without cartridge units, date(s) that the silver recovery unit is cleaned or serviced;
(d) for small scale precipitation units, evidence of compliance with 257 CMR 2.00 (Rules and Regulations for Certified Operators of Wastewater Treatment Facilities) including, but not limited to, date(s) of training(s) and course content;
(e) total amount of wastewater discharged in the past twelve (12) months;
(f) total amount of wastewater passing through the silver recovery system in the past twelve (12) months; and,
(g) MSDSs or other records demonstrating that film processor cleaners do not contain any chromium compounds.

(5) Compliance with Board of Certified Operators of Wastewtater Treatment Facilities Requirements: Each photo processor and each printer using a silver recovery system shall comply with 257 CMR 2.00 (Rules and Regulations for Certified Operators of Wastewater Treatment Facilities), if applicable.

(6) Printers with DEP Sewer Connection Permits: Each printer without an equivalent POTW permit that has a sewer connection permit issued by the Department pursuant to 314 CMR 7.00 shall comply with either 310 CMR 71.05(1)-(4) or with the terms and conditions of that permit.

310 CMR 71.06 Supplemental Requirements for Photo Processors and Printers

(1) Photo processors and printers shall not discharge industrial wastewater to the ground without a groundwater permit pursuant to 314 CMR 5.00, and shall not discharge industrial wastewater to surface water without a permit pursuant to 314 CMR 3.00. Discharge of industrial wastewater to a septic or on site disposal system is prohibited.

(2) Photo processors and printers subject to 310 CMR 71.00 that use silver recovery systems with cartridges or non-cartridges shall comply with the general and specific prohibitions listed below:

a) General Prohibitions. No person shall discharge or cause to be discharged to a POTW any substances, materials or wastewaters that can harm the sewers, wastewater treatment process, or equipment; have an adverse impact on the receiving waters or can otherwise endanger life, limb, public property or constitute a nuisance.

In determining the acceptability of these wastewaters, consideration shall be given to such factors as the quantities of such wastewaters in relation to flows and velocities in the sewers, materials or construction of sewers,nature of the wastewater treatment

process, capacity of the wastewater treatment process, degree of treatability of such wastewaters in the wastewater treatment plant, and other pertinent factors. Pollutants introduced into POTWs by a non domestic source shall not pass through the POTW or interfere with the operation or performance of the works. These general prohibitions and the specific prohibitions listed in 310 CMR 71.06(2)(b) apply to all non-domestic sources introducing pollutants into a POTW whether or not the source is subject to other pretreatment standards or any other Federal, State or local pretreatment requirements.

b) Specific Prohibitions. In addition, the following pollutants shall not be introduced into a POTW:

(1) Pollutants which create a fire or explosion hazard in the POTW;

(2) Pollutants which cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.5 or more than 9.5, unless the works is specifically designed to accommodate such discharges;

(3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;

(4) Any pollutant, including oxygen demanding pollutants discharged in a flow rate and/or pollutant concentration which will cause interference with the POTW;

(5) Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds $40^{o}C(104^{o}F)$ unless the Division, upon request of the POTW, approves alternate temperature limits.

(3) Photo processors and printers generating hazardous waste shall comply with all applicable requirements in 310 CMR 30.000 including requirements for using holding tanks for hazardous waste. These holding tank requirements include:

(a) maintain tanks and containers holding hazardous waste to be recycled on site in accordance with 310 CMR 30.205(19);

(b) maintain tanks and containers holding hazardous waste to be shipped off site in accordance with 310 CMR 30.340, 310 CMR 30.351, or 310 CMR 30.353, as applicable;

(c) maintain records in accordance with 310 CMR 30.310, 310 CMR 30.331, and 310 CMR 30.353(9), as applicable, in order to demonstrate that all hazardous waste is shipped off-site to a facility authorized to receive it pursuant to 310 CMR 30.305 or 310 CMR 30.353(8).

(4) Photo processors and printers using silver recovery systems which are not directly piped to the photo processing wastestream shall:

(a) comply with any existing Class A recycling permit for the unit;

(b) maintain tanks and containers holding hazardous industrial wastewater in accordance with 310 CMR 30.205(19)

(c) record amount of industrial wastewater passing through their silver recovery unit and submit it annually to the Department; and

(d) manage any hazardous waste byproducts either as a regulated recyclable material in accordance with 310 CMR 30.200 or as a hazardous waste in accordance with 310 CMR 30.000.

(5) Photo processors and printers using tanks or containers to store non-hazardous industrial wastewater shall:

(a) use tanks which

1.have a containment structure with 110% capacity of the total volume of all above-ground tanks;

2.have a bell and light alarm in a conspicuous location if they are remotely/automatically filled tanks. The alarm must activate when the level of wastewater reaches seventy-five (75) percent capacity of the tank and the alarm signal must be transmitted to a staffed location. Manually filled tanks must be provided with visual or sight glass type of level measurement;

3. are located to provide year round access for emptying;

4. have odor control as necessary;

5. are made of, or lined with, materials which will not react with, and otherwise be compatible with the, industrial wastewater to be stored; and

6. are located in a secured storage area which is free of cracks and gaps that is sufficiently impervious to contain leaks and spills, and,

7. have a label indicating contents are non-hazardous.

(b) use containers which

1. satisfy requirements set by the Department of Transportation for transportation of waste off-site,

2. have a label indicating contents are non-hazardous, and,

3. are located in a secured storage area which is free of cracks and gaps that is sufficiently impervious to contain leaks and spills.

(c) maintain records sufficient to demonstrate that all industrial wastewater is shipped off-site to the POTW, including, but not limited to, transporter name and address, dates of shipment, amount shipped, and destination. These records shall be kept on-site for at least three (3) years.

(d) implement the following operating procedures and work practices:

1. spill control measures when filling, emptying or transporting containers

2. report to the local Board of Health within twenty-four (24) hours any occurrence of spills released to the environment.

310 CMR 71.07 Compliance Certification for Photo Processors and Printers

(1) Beginning on [date], and annually thereafter, photo processors shall submit to the Department a compliance certification in accordance with 310 CMR 70.00, except that

(a) Photo processors discharging to a POTW holding any sewer connection permit issued pursuant to 314 CMR 7.00 and a hazardous waste recycling permit issued pursuant to 310 CMR 30.200 or a license to treat industrial wastewater pursuant to 310 CMR 30.800 need not

submit such certification until one of these permits expires, at which time such certification shall be submitted in accordance with 310 CMR 71.07, and,

(b) photo processors that do not discharge to the POTW that recycle or treat hazardous waste on-site, and that hold a recycling permit issued pursuant to 310 CMR 30.200 or a license issued pursuant to 310 CMR 30.800 need not submit such certification until the expiration of the permit or license, at which time such certification shall be submitted in accordance with 310 CMR 71.07.

(2) Beginning on September 15, 1998, and annually thereafter, printers shall submit to the Department a compliance certification in accordance with 310 CMR 70.00.

310 CMR 70.00 ENVIRONMENTAL RESULTS PROGRAM CERTIFICATION

70.02 ADD to the definition of Environmental Results Program Facility or ERP Facility in 310 CMR 70.02 Definitions:

c) a printer as defined in 310 CMR 7.26(22).

Water Pollution Control Regulations for Printers

ADD:
314 CMR 7.05 Exemptions

(8) Printers subject to 310 CMR 71.00 are not subject to 314 CMR 7.00

ADD:
314 CMR 12.10 Exemptions

(3) Printers subject to 310 CMR 71.00 need not comply with any provisions of 314 CMR 12.00.